Focus on the Canadian Wildlife Service

BOREAL INSTITUTE
LIBRARY

POLAR
PAM
1505

POLARPAM

Environment Canada
Wildlife Service

Environnement Canada
Service de la Faune

BOREAL INSTITUTE
LIBRARY

Annual review and revision of hunting regulations and wetlands preservation programs help to sustain populations of migratory game birds.

Man shares the world with birds, fish and other animals. Like them, he depends on the land, vegetation, water and air for survival. Any massive changes in the environment which affect wildlife must eventually affect him.

The Canadian Wildlife Service (CWS) deals with wildlife — how it relates to the rest of the environment and to man, how it can be preserved against senseless waste and man's encroachment.

CWS is part of the Environmental Management Service (EMS) within Environment Canada, a federal department. EMS brings together federal programs relating to four major parts of the environment — land, forests, water and wildlife.

The role of CWS is basically twofold: to protect and manage Canada's migratory birds and to cooperate with the provinces, territories and Parks Canada in carrying out wildlife research and management projects within their jurisdictions.

Migratory Birds

By the beginning of this century, populations of some migratory birds were declining, largely because of hunting pressure. Hunting seasons and regulations varied widely from province to province and between Canada and the U.S.A.

CWS and provincial conservation officers identify the sex, age and species of ducks harvested each year from wings which hunters submit.

In 1916 Canada and the U.S.A. agreed to coordinate hunting regulations in both countries. The following year Parliament passed the Migratory Birds Convention Act which made the federal government responsible for protecting and managing migratory birds in Canada. A small unit within the national parks branch of the Department of the Interior, which became the predecessor of CWS, was given this charge.

Over the years, migratory bird management has come to include extensive research on various species of birds, their habits, movements and problems they may cause. Administration of the Migratory Birds Convention Act, however, is still an important part of the program.

Migratory Birds Convention Act

Each year, with the provinces and territories, CWS sets dates for hunting seasons and bag limits on migratory game birds. To do so in a way that will maintain optimum populations of game birds, CWS annually carries out a number of surveys and participates with the provinces and the U.S. Fish and Wildlife Service in others. Surveys are made of breeding grounds in the late spring and early summer to estimate the number of nesting females and hatching success.

Rec'd: Mar 26/79
Order No.:
Price: Free
Acc. No.: CWS

34123

Banding is one important way CWS determines the range, longevity and habitats of different species of birds.

Hunters are involved in two other surveys. By means of a questionnaire, a harvest survey determines how many birds in broad species groups, such as ducks and geese, were killed and where they were shot. For the species composition survey some hunters are asked to contribute duck wings and goose tails. The species, sex and age of the birds are identified from wings and tails submitted. Information gathered from both surveys is used in determining season dates and game bird limits.

To protect all migratory birds, hunting restrictions must be strictly enforced. The CWS coordinates enforcement activities in Canada and cooperates with the U.S. state and federal game agencies. Although CWS enforcement officers can themselves enforce regulations in the field, most of this work is handled by provincial conservation agencies and the RCM Police.

Habitat

Like other wildlife, birds need places where they can breed, feed and rest. Without these areas, they perish.

Much of southern Canada's waterfowl habitat is disappearing, making way for housing developments, industry and highways. Several years ago, CWS began to acquire prime nesting and migratory stop-over land in particularly threatened areas. To date, over 30 National Wildlife Areas have been created as a result and more are being set aside.

CWS is working with the armed forces and other interested agencies to devise ways of eliminating plane collisions with birds.

Other Studies

Crop Damage

Prairie farmers lose millions of dollars in cereal crops to waterfowl each year. CWS and the governments of Alberta, Saskatchewan and Manitoba advise farmers on ways of dispelling the birds and provide partial compensation for crop damages the birds do cause.

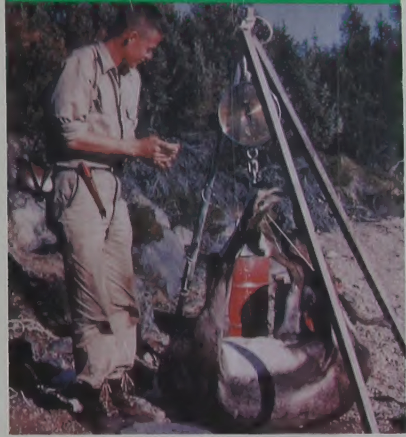
Bird Hazards to Planes

Bird collisions with aircraft have occasionally caused serious damage and, more rarely, loss of human life. With other concerned agencies CWS participates in a committee that has developed a number of ways to reduce the hazard. One of the most effective had been a system for making an airport and its surroundings less attractive to birds. Another is the use of radar to track and report on migrations of flocks of geese and other large birds which should be avoided by aircraft.

Lead Shot Poisoning

A large number of North America's waterfowl, primarily ducks, die each year from lead poisoning.

Research into caribou populations, mortality, longevity, distribution and migrations is a major CWS project.



The poisoning results when birds ingest lead shot while feeding in heavily hunted marshes. CWS has worked with the National Research Council to develop a practical alternative to lead pellets — one which does not damage gun barrels, is dense enough to kill and not cripple birds and which is non-toxic. A lead-iron shot has been proposed.

Wildlife Management

Wildlife, other than that found in national parks and migratory birds, is a provincial and territorial responsibility. Research and management programs relating to wildlife must be co-ordinated across the country, however, if they are to be effective. The Canada Wildlife Act of 1973 gave the federal government, and CWS in particular, a mandate to help the provinces and territories conduct wildlife programs and enter into agreements with them, if necessary, to solve wildlife problems.

The radio collar being attached to this drugged polar bear will provide CWS with data on the bear's movements, distribution, denning habits and other characteristics.

Environmental Assessment

CWS impact studies provide data on wildlife — which species are located in different areas, how adaptable they are to man-made changes, what their requirements are for survival.

Most large-scale impact studies are in the north, a region which has just begun to feel the effects of resource development. Major developments must be planned carefully if they are not to damage permanently the fragile ecosystems of the north.

CWS biologists are helping to plan the location of the Mackenzie Highway to avoid sensitive wildlife regions. They are studying bird and mammal movements in the Beaufort Sea, and are radio-tracking species such as muskoxen and polar bears. They have carried out vegetation surveys on Melville and Bathurst Islands. Another important assessment is underway in the Hudson and James Bay region, determining the impact of the James Bay power project on waterfowl. Data accumulated through such studies are helping make responsible development possible.

The Peregrine Falcon, long sought by falconers, is now protected by an international agreement which restricts trade in endangered animals and plants.

Conservation

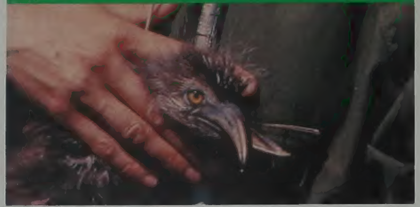
Studying and providing management advice on rare and endangered species are CWS activities that will have important consequences for the future.

CWS is involved in a captive breeding program for Peregrine Falcons whose numbers have declined dramatically in the past two decades. Pesticide residues which the birds retain in their tissues are thought to be the major reason for their decline; CWS research is contributing substantial evidence to support this view.

CWS and the U.S. Fish and Wildlife Service are trying to save the Whooping Crane from extinction. Only about 60 of the birds survive in the wild. A captive flock of Whoopers, raised from eggs gathered from the nesting grounds in the Northwest Territories, is gradually reaching maturity in a research centre in Patuxent, Maryland. In Idaho a wild flock has been started from eggs placed under Sandhill Cranes.

Wood bison once roamed the wooded areas of North America from northern Colorado to the Northwest Territories. Today, most of the remaining few live in isolation in Elk Island Park near Edmonton. A wood bison committee composed of CWS, Parks Canada and N.W.T. personnel, is investigating ways to transplant some wood bison to other areas in their former range. A few have been successfully moved to the Mackenzie Bison Sanctuary west of Great Slave Lake.

High concentrations of certain toxic residues in birds sometimes produce abnormalities like this crossed bill in their offspring.



Hunting of polar bears is a recognized traditional native right in Canada. Polar bear populations on the whole are not considered endangered in this country. To determine the number of bears that can be killed annually without reducing their populations significantly, CWS is studying the bears' longevity, denning habits, breeding, feeding, populations and migrations. An international agreement with the four other polar bear nations, U.S.S.R., U.S.A., Norway and Denmark, protects the bears in international waters and provides for a better information exchange on polar bear research.

National Parks Research

National parks are areas set aside to preserve their scenic beauty, their wildlife and vegetation. With the heavy increase in numbers of park visitors care must be taken to ensure the habitat on which wildlife depends is not impaired.

CWS helps park personnel take wildlife inventories, conduct long-term research projects on various types of animals and their habitats, and solve wildlife problems.

More data are needed on certain animals that do not adapt to man, such as the grizzly bear. To minimize their contact with humans and ensure their survival, CWS is carrying out studies on their range, habits, land requirements and populations.

Life in lakes, streams and rivers in the parks depends on many factors. CWS is identifying these factors, taking stock of fish populations, the chemical composition of the water and its depth, light penetration, temperature and plant growth.

A CWS naturalist leads a young visitor through a jungle of cattails which extends out into the marsh at Wye Marsh Wildlife Centre.

Such studies help parks managers plan trails, garbage disposal, highways and campsites with minimum interference to the park's wildlife and vegetation.

Toxic Chemicals

Most toxic chemicals enter the environment through man's activities in agriculture, industry and forestry. The pollution created affects many forms of wildlife.

CWS toxic chemical research concentrates mainly on birds because a number of bird populations have been noticeably affected by toxic chemicals.

One study involves forest birds in parts of New Brunswick and Quebec where spruce budworm spraying is carried out. CWS monitors the effects of spraying on small forest birds and advises the agencies responsible for spraying on the use of chemicals which do the least damage to the birds.

CWS impact studies of vegetation and wildlife help developers locate proposed projects with minimum damage to the environment.

CWS is also investigating how chemical contamination of the Great Lakes affects the breeding success of fish-eating birds living there.

In the Prairie Provinces, CWS studies of ways in which herbicides alter the habitat on which wildlife depends, may lead to changes in agricultural practices which are found to be detrimental to wildlife.

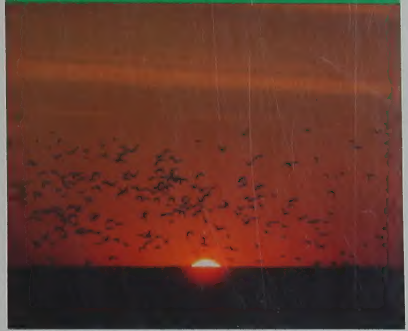
Pathology

CWS helps the territories and Parks Canada maintain healthy wildlife populations by conducting studies of their health status and investigating die-offs and disease problems in these populations.

A major disease control program involves bison in northern Canada. Close watch is kept on bison herds for signs of anthrax, an infectious disease which can kill bison and other mammals, including man. CWS personnel innoculate bison against the disease in Wood Buffalo National Park and adjacent areas in the Northwest Territories. This measure has helped reduce the number of outbreaks in recent years.

CWS helps determine causes of death in migratory birds. CWS pathologists are constantly on the alert for infectious diseases in migratory birds so that any possible corrective measures can be applied.

Issued under the authority of the
Minister of the Environment
© Information Canada
Catalogue No. CW66-45/1976
Ottawa, 1976
Design: Jacques Charette and
Associates Ltd.



Interpretation

CWS interprets the land and its wildlife for the general public, telling Canada's ecological story in centres located in different biotic regions and, in some cases, near wildlife spectacles like the Gannet colony on Bonaventure Island.

Wildlife centres are located at Percé and Tourmente in Quebec, at Wye Marsh in Ontario, and at Creston, British Columbia. Most are within a day's drive of a city and are located just off the Trans Canada or another major highway.

CWS publishes a wide range of technical and general information pamphlets and also sponsors feature-length films on wildlife and the Service's activities. Films or information concerning films can be obtained from the National Film Board office in your area.

For more information on the Canadian Wildlife Service write or telephone:

Canadian Wildlife Service
Ottawa, Ontario
K1A 0H3
819-997-1686